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EG&G - ROCKY FLATS PLANT  
ENVIRONMENTAL MANAGEMENT

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**ROCKY FLATS PLANT  
EMD OPERATING  
PROCEDURES MANUAL**

Manual No.: 5-21000-OPS-FO  
Procedure No.: Table of Contents, Rev 13  
Page: 1 of 2  
Effective Date: 05/12/92  
Organization: Environmental Management

**THIS IS ONE VOLUME OF A SIX VOLUME SET WHICH INCLUDES:**

**VOLUME I: FIELD OPERATIONS (FO)  
VOLUME II: GROUNDWATER (GW)  
VOLUME III: GEOTECHNICAL (GT)  
VOLUME IV: SURFACE WATER (SW)  
VOLUME V: ECOLOGY (EE)  
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FO.03	General Equipment Decontamination	2	05/12/92
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DCN 92.01	Clarification of Work Area	1	01/31/92
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FO.09	Handling of Residual Samples	1	08/30/91
FO.10	Receiving, Labeling, and Handling Environmental Materials Containers	2	05/12/92

**ADMIN RECORD**

A-SW-001022

REVIEWED FOR CLASSIFICATION/UCI

By

Date

*[Signature]*  
18, 1992  
*[Signature]* 12/92 *[Signature]*

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FO.11	Field Communications	2	05/12/92
FO.12	Decontamination Facility Operations	2	05/12/92
FO.13	Containerization, Preserving, Handling and Shipping of Soil and Water Samples	2	05/12/92
FO.14	Field Data Management	2	05/12/92
FO.15	Photoionization Detectors (PIDs) and Flame Ionization Detectors (FIDs)	2	05/12/92
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DCN 92.04	Clarification of Seismic Lines	1	04/13/92
FO.17	Determining Out-Of-Specification Analytical Results for Environmental Samples		To Be Added
FO.18	Environmental Sample Radioactivity Content Screening	2	05/12/92
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**HANDLING OF DECONTAMINATION WATER AND WASH WATER**

EG&G ROCKY FLATS PLANT  
EMD MANUAL OPERATION SOP

Manual: 5-21000-OPS  
Procedure No.: FO.7, Rev. 2  
Page: 1 of 9  
Effective Date: March 1, 1992  
Organization: Environmental Management

Category 2

TITLE:  
HANDLING OF DECONTAMINATION  
WATER AND WASH WATER

Approved By:

MAY 12 1992

(Name of Approver) (Date)

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REVIEWED FOR CLASSIFICATION/UCNI

By [Signature]  
Date March 1, 1992

## **HANDLING OF DECONTAMINATION WATER AND WASH WATER**

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### **2.0 PURPOSE AND SCOPE**

This standard operating procedure (SOP) describes procedures that will be used by subcontractors at Rocky Flats to handle decontamination water and wash water used during Environmental Management (EM) field activities.

### **3.0 RESPONSIBILITIES AND QUALIFICATIONS**

Personnel using light or heavy equipment, scientific monitoring devices, or operating company vehicles must have appropriate training and/or licenses.

The subcontractor's site manager is responsible for coordinating the removal and transfer of all solid environmental materials from the project work area.

The subcontractor is also responsible for moving environmental liquids to holding tanks located at the central EG&G decontamination facility.

It is the subcontractor's site manager's responsibility to report as soon as possible to the EG&G project manager or a designated EG&G representative any damage incurred to a drum. Types of damage include holes, damage to the lid seal, or any other problem that may compromise drum integrity. Damaged drums must have their contents transferred to an undamaged drum.

The subcontractor's site manager will assign personnel to conduct weekly inspections of all the drums issued to the subcontractor until relinquished to EG&G. These inspections will ensure that drum integrity is maintained.

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Radiological Engineering-approved subcontractor Health and Safety Specialists are responsible for conducting radiation screenings of equipment, samples, and personnel before they leave the work area.

EG&G's Waste Operations personnel are responsible for the collection, transport, and storage of solid environmental materials from the drum transfer area and environmental liquids at the main decontamination facility.

#### 4.0 REFERENCES

#### 4.1 SOURCE REFERENCES

The following is a list of references reviewed prior to the writing of this procedure:

EG&G. Use and Color Coding of Drums. Policies: Rocky Flats Plant. RFPM MAT 20-005. November 3, 1989.

Environmental Protection Agency (EPA). A Compendium of Superfund Field Operations Methods. EPA/540/P-87/001. December 1987.

RCRA Facility Investigation Guidance. Interim Final. May 1989.

#### 4.2 INTERNAL REFERENCES

Related SOPs cross-referenced in this SOP are as follows:

- SOP FO.3, General Equipment Decontamination
- SOP FO.4, Heavy Equipment Decontamination

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- SOP FO.8, Handling of Drilling Fluids and Cuttings
- SOP FO.10, Receiving, Labeling, and Handling Environmental Materials Containers
- SOP FO.12, Decontamination Facility Operations
- SOP FO.15, Photoionization Detectors (PIDs) and Flame Ionization Detectors (FIDs)
- SOP FO.16, Field Radiological Measurements

### 5.0 EQUIPMENT

The minimum equipment needed to handle decontamination water or wash water are the following:

- Truck or trailer with enclosed sides for moving liquid waste containers
- Personal splash protection equipment
- Pump (hand or peristaltic)
- Gray drums or other liquid waste containers
- Drum handling equipment (if drums are used)

### 6.0 WORK AREA CHARACTERIZATIONS

Each project work area will be characterized by EG&G prior to any field activity. Work area characterizations will be based on the historical background of the work area and include the chemical results of previous soil and groundwater analyses and the results of field radiological surveys conducted by Radiological Engineering-approved subcontractor Health and Safety Specialists. Work areas associated with the EM program field operations fall into two characterizations: potentially contaminated and not potentially contaminated. Work areas currently characterized as potentially contaminated include the following:

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- Individual Hazardous Substance Sites (IHSSs)
- Identified Groundwater Plume Areas
- Americium Zone at OU No. 2
- Protected Areas (PA)

See SOP FO.10, Receiving, Labeling, and Handling Environmental Materials Containers for specific work areas currently characterized as potentially contaminated.

The types of contamination that may be encountered within potentially contaminated work areas include the following:

- Low-level radioactively contaminated substances
- Nonradioactive RCRA regulated hazardous (hazardous) substances
- Mixed (low-level radioactive and hazardous substances)

### 6.1 HANDLING OF DECONTAMINATION WATER AND WASH WATER

Decontamination water is soapy or clear water used for cleaning and rinsing equipment, personnel, samples, or vehicles used in work areas characterized as potentially contaminated or in not potentially contaminated work areas, where verified positive detections above background were encountered during field monitoring. The water used to clean equipment used during drilling activities, regardless of the work area characterization, will be considered decontamination water.

Wash water is soapy or clear water used to clean equipment, personnel, samples, or vehicles used at work areas characterized as not potentially contaminated where no verified positive readings above background were detected during field monitoring.

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If a work area is characterized as not potentially contaminated but verified results from field monitoring indicate the presence of previously unsuspected contaminated substances, the water used for cleaning equipment, personnel, samples, and vehicles is considered decontamination water.

### **6.1.1 Handling of Decontamination Water**

Decontamination water will be contained by the subcontractor in gray 55-gallon drums, 30-gallon drums or liquid containers. The drums will be taken by the subcontractor to the main EG&G decontamination facility. The decontamination facility will have an area specifically designed for environmental liquids disposal (see SOP FO.12, Decontamination Facility Operations for details pertaining to the environmental liquids area). The subcontractor will empty the entire drum's contents into this area.

Other considerations to ensure the proper handling of decontamination water are:

- Due to high phosphate levels, Alconox will not be used. Liquinox or a phosphate-free equivalent will be used.
- Decontamination water used by subcontracting personnel must be replaced at least once daily regardless of the contamination level. Replacement may be required more than once a day, depending on field conditions (i.e., heavy mud or organic or radioactive contaminants).
- Use gray, 55-gallon, or 30-gallon open top (removable top) drums or environmental liquids containers appropriately sized for the task to move decontamination water.



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- Liquid container lids will be secured and containers will be moved in trucks with enclosed sides.
- Mark the liquid containers used for moving environmental liquids with the words "NONPOTABLE PENDING ANALYSIS" as described in SOP FO.10, Receiving, Labeling, and Handling Environmental Materials Containers.
- Document the use of gray drums for moving environmental liquids on the Drum Field Log Form (Form FO.10A, see Section 8.0 - Documentation.)
- Decontaminate containers used to move environmental liquids after emptying them. (See SOP FO.3, General Equipment Decontamination.)
- No containers with holes, leaks, or bad seals will be used for moving decontamination water.
- Proper "splash" protection must be used while handling fluids (see SOP FO.4, Heavy Equipment Decontamination.)

### 6.1.2 Handling of Wash Water

For surface water field activities in areas characterized as background stations (uncontaminated) (see site specific work plan and/or health and safety plan) wash water and rinse water will be disposed of on the ground at least 50 feet from the sampling location such that the waste water cannot discharge into any stream, pond, or other surface water impoundment.

Wash water used to clean equipment, personnel, and vehicles during surface soil sampling, groundwater sampling and post drilling grout mixing activities in work areas characterized as not

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potentially contaminated where no verified positive reading were detected on field monitors will be disposed of approximately 50 feet from the sampling location. The disposal location must be at least 200 feet from any stream drainage.

### **7.0 DECONTAMINATION**

Decontamination of equipment used to handle and move decontamination water will be done in accordance with SOP FO.4, Heavy Equipment Decontamination and SOP FO.3, General Equipment Decontamination, and will be done between work areas so as not to promote cross-contamination of work areas. Equipment and containers used for handling wash water will be power sprayed and rinsed.

### **8.0 DOCUMENTATION**

#### **8.1 DRUM FIELD LOG FORM**

If gray drums are used for moving environmental liquids, a Drum Field Log Form (Form FO.10A) will be filled out in order to maintain a "cradle to grave" record. Information on the Field Drum Log Form includes:

- Drum ID number
- Date of issue
- Location in field
- Contents
- Fill date
- Date of decontamination and area location
- Date returned to EG&G

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Any damage incurred to a drum either during shipping or handling will be reported to an EG&G representative as soon as possible for immediate correction.

Entries made on the Drum Field Log Form may be supported with entries in a field logbook.

## DRUM FIELD LOG FORM

NAME OF THE SUBCONTRACTOR \_\_\_\_\_

DRUM ID NUMBER WITH SUB. ID \_\_\_\_\_

DRUM ISSUE DATE \_\_\_\_\_

LOCATION OF ISSUANCE \_\_\_\_\_

PROJECT NAME &amp; NUMBER \_\_\_\_\_

LOCATION OF FIELD ACTIVITY \_\_\_\_\_

ASSOCIATED WELL, BORING, OR \_\_\_\_\_

CONTENTS OF DRUM \_\_\_\_\_

SUBSURFACE INTERVALS (IF SOILS)

ASSOCIATED SAMPLE ID NUMBERS

DATE DRUM WAS FILLED \_\_\_\_\_

SIG. OF PERSON FILLING THE DRUM \_\_\_\_\_

**IF SOLID ENVIRONMENTAL MATERIALS**

LOCATION OF TEMP. STORAGE AREA \_\_\_\_\_

DATE DRUM RETURNED TO EG&amp;G \_\_\_\_\_

SIG. OF EG&amp;G REPRESENTATIVE \_\_\_\_\_

**IF ENVIRONMENTAL LIQUIDS**

DATE &amp; LOCATION WHERE CONTENTS

DATE

LOCATION

WERE EMPTIED AND DECONNED

(c.g. 2/18/91 DECON PAD # \_\_\_\_)